

Office Action Summary**Application No.**

10/799,900

Applicant(s)

WRIGHT ET AL.

Examiner

PABLO TRAN

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) 4, 6, 7 and 10-36 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 8, 9 and 37-39 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 8-9, and 37-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shen (US Pat No 2004/0116096) in view of McCarthy et al. (hereinafter "McCarthy", US Pat No 2003/0193373) and further in view of Smith (US Pat No 6,014,554)

As per claims 1-3, 8-9, and 38, Shen disclose an integrated circuit comprising a first amplifier (see fig. 1/no. 15); a first oscillator (see fig. 1/no. 21); a first mixer (see fig. 1/no. 19); a second oscillator (see fig. 1/no. 28); a second mixer (see fig. 1/no. 27); a second amplifier (see fig. 1/no. 25); a serial control module (fig. 6/no. 128); a programmable intermediate filter (see fig. 1/no. 23, fig. 3/no. 80) through a control interface (see 0028, 0030).

Shen does not specifically disclose a programmable filter with an arrangement as claimed. However, McCarthy disclose such programmable filter comprising a programmable filter include a first filter stage, the first filter stage including a first LC resonator (see fig. 1A/no. 125 & 130, fig. 1B/no. 125 & 130, and fig. 2/no. 125 & 130) and including a first adjustable capacitor array having a first plurality of switches (see

fig. 1A/no. 185, 187, 189 and fig. 2/no. 238, 240, 242, 244, 246, 248) coupled to the first LC resonator (see fig. 1A, fig. 1B, and fig. 2), the first adjustable capacitor array having an effective capacitance value adjust through the use of fuses. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention for Shen to utilize the programmable filter, as taught by McCarthy to reduce to number of external components but also to effectively tune to a desired channel. Also, McCarthy further disclosed that the capacitor switching matrix can be program by utilizing fuses (see fig. 1A, fig. 1B, fig. 2, and claim 8).

The modified programmable filter of Shen and McCarthy disclose capacitor matrixes (see McCarthy, fig. 1A and fig. 2), wherein at least one capacitance value is selected from the capacitor banks through the use of plurality of fuses. However, Smith disclosed such programmable filter having at least one capacitance value selected through the use of fuses or from the plurality of data storage locations (see col. 8/ln. 26-35). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention for the modified programmable filter of Shen and McCarthy to incorporate the filter programming method, as taught by Smith, to reduce the effort required to select the desired channel.

As per claim 37, the modified programmable filter of Shen, McCarthy, and Smith further disclose that a capacitor of the LC resonator is part of the integrated circuit (see McCarthy, 0016)

As per claim 39, the modified programmable filter of Shen, McCarthy, and Smith further disclose the first plurality of programmable data storage locations are

programmable through a set of test points of the integrated circuit, the test points of the set of test points not directly connected to pins of the integrated circuit (see Smith, col. 8/ln. 26-35).

Allowable Subject Matter

3. Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

4. Applicant's arguments filed 08/09/11 have been fully considered but they are not persuasive.

The Applicant's stated that, "McCarthy is cited as teaching the claimed adjustable capacitor array. However, the capacitive network taught by McCarthy does not include switches. In response to the Applicant, McCarthy discloses an adjustable capacitor array having a first plurality of (fuses) switches (see fig. 1A/no. 185, 187, 189 and fig. 2/no. 238, 240, 242, 244, 246, 248. Also, see specification, paragraph 0053, wherein the capacitor array utilized fuses as one type of switches). Therefore, the rejection is proper. The Applicant stated that, "Even if it is proper to apply programming via data storage locations of Smith, as proposed, only a single programming line 191 of McCarthy is available such that only a programmable data storage location is used to adjust the capacitive elements. This is not the same as the claimed limitations which specify that the capacitive array is adjustable through use of a plurality of programmable data storage elements, not a single programmable data storage element. As such, the

proposed combination of Shen, McCarthy, and Smith does not teach the limitation. In response to the Applicant, Smith discloses a programmable tunable filter (see col. 8/ln. 24-35) wherein the programmable capacitor switching matrix having at least a capacitance value selected/adjust through the use of fuses/switches or from the plurality of data storage locations. It is obvious that one of ordinary skill in the art that the capacitance values are stored in various locations within a storage device (see col. 8/ln. 24-35. Also, see specification, paragraph 0057) and at a least a capacitance value is selected from storage for tuning purpose and that the appropriated fuses/switches are selected (turn on/off or blow) to tune to the desire frequency or until a desire frequency has reached. Furthermore, if the Applicant relied on the limitation, "the plurality of programmable storage locations", wherein such limitation is not novel. Therefore, the rejection is proper.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pablo Tran whose telephone number is (571)272-7898. The examiner normal hours are 9:30 -5:00 (Monday-Friday). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban, can be reached at (571)272-7899. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.
6. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) System. Status information for Published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-directauspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (in USA or CANADA) or 571-272-1000.

8/13/2011

/P. T./

Primary Examiner, Art Unit 2618